



## DUAL COMMUNICATION MODE WIRELESS NETWORK TRANSMISSION DEVICE

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### FIELD OF THE INVENTION

5 The present invention relates to wireless communication, and particular to a wireless network transmission device which uses the network communication protocol module and mobile phone communication protocol module in parallel so that data can be transmitted effectively with a higher quality by the alternative use of the two protocol.

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### BACKGROUND OF THE INVENTION

With the improvement of wireless communication, the notebook computers (or even other computer devices, or PDAs (personal digital assistants, etc) can communicate wirelessly by wireless networks or through  
15 mobile phones. In general, one notebook computer is equipped only one kind of protocol so that the users only select one communication way to communicate wirelessly. However, since the wireless device is strictly confined by the coverage defined by base stations. Thereby, it is often that the communication quality is not good.

20 However, if the user can switch between devices using the two communication protocols so that it can select one with preferred signal quality, then a preferred communication will be acquired.

### SUMMARY OF THE INVENTION

25 Accordingly, the primary object of the present invention is to provide a wireless network transmission device which uses two protocols for communication so as to have a preferred communication quality.

To achieve above object, the present invention provide a wireless network transmission device. A network control chip, a communication control chip and a control chip set are arranged in parallel. The network control chip, communication control chip, and control chip set are  
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connected to the first USP module and the second USP module through a bus. The first USP module is connected to an external network communication protocol module and the second USP module is connected an external mobile phone communication protocol module. Thus, the system is communicable with network communication protocol module and mobile phone communication protocol module in parallel; thereby, two data of different protocol being transmitted in parallel. The control chip set serves to connect a PCMCIA interface to the first USP module and second USP module through the network control chip and the communication control chip.

The various objects and advantages of the present invention will be more readily understood from the following detailed description when read in conjunction with the appended drawing.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 shows the connection of the wireless network transmission device of the present invention.

Fig. 2 is a schematic view showing one embodiment of the present invention.

## **DETAILED DESCRIPTION OF THE INVENTION**

In order that those skilled in the art can further understand the present invention, a description will be described in the following in details. However, these descriptions and the appended drawings are only used to cause those skilled in the art to understand the objects, features, and characteristics of the present invention, but not to be used to confine the scope and spirit of the present invention defined in the appended claims.

With reference to Fig. 1, the present invention provides a system for parallel using a wireless network card and a mobile phone. The system comprises the following elements.

A wireless network transmission device 1 includes a network control

chip 2, a communication control chip 3 and a control chip set 4 which are arranged in parallel. The network control chip 2, communication control chip 3, and control chip set 4 are connected to a USP module 5 and a USP module 6 through a bus. The USP module 5 is connected to an external network communication protocol module 7 and the USP module 6 is connected an external mobile phone communication protocol module 8. Thereby, the system can communicate with the network communication protocol module 7 and mobile phone communication protocol module 8 in parallel over different sections. Thereby, two data of different protocol can be transmitted in parallel.

The control chip set 4 serves to connect a PCMCIA interface 9 to the USP module 5 and USP module 6 through network control chip 2 and the communication control chip 3.

In the present invention, the protocol of the network communication protocol module 7 can selected from one of for example WLAN802.11a/b/b+/g/g+ and the protocol of the mobile phone communication protocol module 8 is selected from one of for example GPRS, CDMA, WCDMA, CDMA1X, TD-CDMA.

With reference to Fig. 2, one embodiment of the present invention is illustrated. The wireless network transmission device 1 is installed to a notebook computer 10. Initially, the notebook computer 10 is communicated with a mobile phone 11 through the network communication protocol module 7. When the wireless network transmission device 1 is near the coverage of a base station, but not in the coverage. The data to be transmitted in the network transmission and receiving end 12 is by using the mobile phone communication protocol module 8.

Advantages of the present invention are that two protocols are used at the same time so that the communication will not confined in a narrow coverage. Thereby, when the quality of signal is not good, the module can be changed so that the decay of signals can be avoided.

The present invention is thus described, it will be obvious that the same

may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the present invention, and all such modifications as would be obvious to one skilled in the art are intended to be included within the scope of the following claims.